PENOBSCOT COUNTY
EMERGENCY MANAGEMENT AGENCY

Unmanned Aircraft System (UAS)
Operations Policy

2024

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I. PROMULGATION STATEMENT

The Unmanned Aerial Systems policy for Penobscot County Emergency Management Agency is transmitted herewith. The mission of Penobscot County Emergency Management Agency will ensure, through coordination with federal, state, county, and local stakeholders, that the county is prepared to respond to and recover from any natural, technological, and human-caused emergencies. This office will provide the leadership and support to reduce the loss of life and property through an all-hazards emergency management program of mitigation, preparedness, response, and recovery throughout Penobscot County.

This UAS policy provides a framework and program guidance for the requisite fundamental education, training, exercise, and real-world implementation. It adheres to the critical elements outlined in The Privacy Act of 1974 (5 U.S.C. 552a), Public Law (112-95, § 334), FAA regulations (14 CFR, § 21.191 & § 91.209), and Maine Law (Title 25 Part 12: Ch 551).

The Penobscot County Commissioners have reviewed and approved the Unmanned Aerial Systems policy for the Penobscot County Emergency Management Agency.

County Commissioner, Chair	10/1/2024 Date
County Commissioner	10/01/2024 Date
County Commissioner	10/01/24 Date
County Administrator	10-01-2024 Date

II. ANNUAL REVIEW

This policy will be reviewed and revised annually to ensure that all operations and missions meet all internal guidelines and procedures and that any federal, state, or local laws and guidelines have been executed. The policy will be amended to include any changes made to the Unmanned Aerial System (UAS) team administration, operational procedures, or updates/changes made to any Federal, State, or Local laws. After each mission, an After-Action Report (AAR) will be conducted to document all pertinent details. The AAR's are then reviewed by the EMA director and the EMA GIS database manager as the default UAS lead pilot to ensure that each deployment has been conducted properly and complies with all governing agencies and laws.

III. RECORD OF CHANGES

Change Number	Section	Date of Change	Individual Making Change	Description of Change
0001	Entire policy	9-1-2024	Bradley Nuding	Development of UAS policy
0002	Promulgation Statement	10-1-2024	Bradley Nuding	County Commissioners approved the policy.

IV. CONCEPT OF OPERATIONS

Efficient and effective comprehensive emergency management relies heavily on the ability of the county's elected and appointed officials to give appropriate emphasis and commit the necessary resources to ensure that emergency management is capable of implementing life safety measures in a crisis. As public servants, emergency management must be prepared to overcome the many potentially serious challenges that may suddenly face the communities it serves - so that any crisis can be stabilized at the earliest possible time and the severity of adverse consequences and impacts can be minimized or eliminated. None of this will likely happen if well-thought-out and rehearsed plans and procedures are not in place to affect an orderly response and recovery to preserve life and essential functions.

To utilize UAS to support one of the pre-identified operations outlined in this plan, the UAS is to be flown per state and federal laws, including but not limited to the Federal Aviation Administration (FAA), with safety a priority to protect responders, victims, and the aircraft itself. Penobscot County Emergency Management Agency (PTEMA) is responsible as the registered owner for ensuring the UAS is airworthy and will be operated and maintained in strict compliance with the manufacturer's operational and maintenance recommendations. These responsibilities and all FAA regulations extend to the Remote Pilot in Command (RPIC).

A. PHASE I: READINESS AND PREPAREDNESS

Before deploying, the UAS RPIC will utilize the following mission planning checklist:

1. ___ Complete the UAS Mission Form (Appendix A)
2. ___ Conduct Risk Assessment and make GO/NO GO decision
3. ___ Review airspace requirements and verify no temporary flight restrictions
4. ___ Analyze the area of operation using all available resources to identify safety, airspace, liability, and visibility concerns.
4. ___ Gain authorization from the EMA GIS database manager or EMA director
5. ___ Select the best location for the point of departure (POD) where the RPIC will have an unobstructed line of sight.
6. ___ Brief the support team and other participants or agencies as necessary

7. ___ Brief the EMA GIS database manager or EMA director on any anomalies or safety concerns before the flight.

B. PHASE II: ACTIVATION

i. Areas of Operations

a) The primary area of operations will be within Penobscot County, which encompasses local, county, state, and federal government, including the Department of Defense and Tribal Nations jurisdictions.

b) The second area of operations encompasses all statewide mutual aid as feasible under the requesting public safety agency.

ii. UAS Mission Intent

Unmanned Aerial Vehicles shall be used only for the following purposes:

a) Critical Infrastructure Incidents
b) FEMA Public Assistance Damage Assessments
c) Fires (Structural and Wildfires)
d) Hazardous Materials Incidents
e) Law Enforcement Incidents
f) Mass Casualty Incidents
g) Proficiency Training
h) Public Safety of Mass Gatherings
i) Search and Rescue Incidents
j) Structural Integrity Assessments

iii. Mission Vetting

To maintain accountability of resources on scene, a request for the use of Penobscot County EMA's UAS must be officially requested through the Penobscot County Regional Communications Center (PRCC). The request must include the deployment's purpose, the incident commander's contact information, and grid coordinates to where the UAS team shall deploy. Requests must be consistent with

EMA's overall mission and must be approved by the EMA director of emergency management or the EMA GIS database manager.

iv. Transparency of Operations

a) Penobscot County EMA is committed to transparency in operations. Our public website and social media accounts describe our special response teams and the scope of the response. This will serve as a public notice of operations.

b) This policy outlines all procedures the UAS team will follow and will be published on the Penobscot County Emergency Management Agency website under the Unmanned Aerial Systems section. This will serve as a public notice of policies and procedures.

c) Due to the nature of some missions, not all upcoming operations are scheduled, and some missions will require no public notification due to sensitivity or scene safety (e.g., criminal investigations, crime scenes, etc.). For missions planned that are not sensitive in nature, a notice will be posted to the public website advising of the upcoming operation. The agency requesting UAS resources may also provide public notification of scheduled operations before, during, or after a mission is complete.

d) For specific public safety operations, a UAS NOTAM (Notice of Air Mission) is filed with the FAA, depicting the radius of the area, altitudes to be flown, and date/time of the operation within the airspace. This is available to the general public as well as pilots and users of the airspace.

e) Using the data stored in the drone software platform, an annual year-end summary of operations will be prepared and then posted to the EMA website. This report will indicate the total number and type of missions completed, training, and non-emergency use over the past year.

v. Remote Pilot in Command Completion Checklist

1.____ Safely return aircraft to departure point

2.____ Conduct post-flight inspection of aircraft

3.____ Secure UAS for next mission

4.____ Sign and document flight log

5.____ Hot-wash support team as necessary and note lessons learned

6.____ Debrief the Incident Commander as requested and provide After-Action-Report to the EMA Director.

vi. Night Operations

Small UAS operations may be conducted at night, as defined in 14 CFR § 1.1, provided:

i. The drone anti-collision lighting must be operational and on before the flight.

ii. Before conducting night operations, the RPIC and the visual observer (VO) must be trained to recognize and overcome visual illusions caused by darkness and understand physiological conditions that may degrade night vision. This training must be documented and must be presented for inspection upon request from the Administrator or an authorized representative

iii. The UAS must be equipped with illuminated anti-collision lighting visible from a distance of no less than three statute miles. The intensity of the anti-collision lighting may be reduced if, because of operating conditions, it would be in the interest of safety to do so. Additionally, to comply with § 91.209, the aircraft must have position lighting that enables determination of location altitude, attitude, and direction of flight.

V. DISASTER INTELLIGENCE

Penobscot County EMA may collect sensitive disaster intelligence through UAS operations, such as photographs, video, or audio during a crisis event. Dissemination of disaster intelligence will be restricted on a need-to-know basis and will be at the discretion of the law enforcement agency having jurisdiction.

VI. TRAINING AND QUALIFICATION

Recruitment of a volunteer-based UAS pilot cadre is essential to ensure Penobscot County EMA is well-positioned to support simultaneous UAS operations 24/7 across our 60 municipalities and unorganized territory. Like EMA's other volunteer teams, the Penobscot County EMA UAS team will complete an application process, including a background check and verification of their Part 107 license. The Penobscot County EMA GIS database manager manages the UAS program, including volunteer recruitment and management, facilitating proficiency training, and monitoring volunteer pilots during deployments. The UAS team will conduct monthly training, ensuring it is conducted in varying weather conditions, time of day, and topography scenarios to maximize proficiency in operations. To meet the FAA's requirement to maintain aeronautical knowledge recency every 24 calendar months to comply with Part 107.65, the RPIC must complete the FAA Part 107 Small UAS Recurrent online training. The 24 months will be based on the issuing date of their Part 107 license. At a minimum, the UAS team should comprise an RPIC and a VO to aid the RPIC, particularly in night operations. The GIS database manager will ensure that the volunteer pilots and themselves stay up-to-date on UAS industry standards and state and federal laws/policies and attend training, conferences, and disaster exercises related to UAS use in comprehensive emergency management. Finally, the EMA director and/or the EMA deputy director shall maintain a Part 107 license to maintain capabilities.

VII. UNAUTHORIZED USAGE

Under no circumstances shall the Remote Pilot in Command approve a mission for the sole purpose of, or continue to operate during a standard, traditional mission when the below unauthorized circumstances arise:

i. Invasion of privacy {eavesdropping)
ii. Monitoring or video recording of public unless legally authorized.
iii. Personal use or in conflict with private sector {i.e.; hobbyist, fun, and recreation)
iv. Infringement of Civil Rights and Liberties as described below:

Respect for civil rights and liberties is our republic's core tenet. In executing Penobscot County EMA's support to law enforcement and national security missions, personnel must rigorously support and defend the U.S. Constitution and uphold the laws, regulations, and policies governing its activities and operations. UAS operations must be consistent with the U.S. Constitution and all investigative methods. The Fourth Amendment protects individuals from unreasonable searches and seizures. Generally, law enforcement must seek a warrant when a person reasonably expects privacy. Moreover, agencies are prohibited from using UAS to collect, use, retain, or disseminate data in any manner that would violate the First Amendment or the lawful exercise of other rights secured by the U.S. Constitution and laws of the United States.

Penobscot County EMA UAS pilots are prohibited from using UAS in any manner that would discriminate against persons based upon their ethnicity, race, gender, national origin, religion, sexual orientation, or gender identity, in violation of law. Penobscot County EMA UAS pilots must be trained to understand and abide by all relevant federal legal standards applicable to using UAS and seek advice from legal counsel as necessary. In addition, Penobscot County EMA UAS will only be used in connection with properly authorized investigations and activities. Statutory authorities, the Maine Attorney General's guidelines, and other relevant agency policies and guidance define the scope of authorized investigations and activities and the context of these existing safeguards. Additionally, even within the context of properly authorized activities, personnel often must choose among varying investigative methods that are operationally sound, reasonable, and effective but may be more or less intrusive relative to individuals' privacy and civil liberties. Before using UAS, Penobscot County EMA UAS pilots must assess the relative intrusiveness of the proposed use of UAS and balance it against the investigative need as articulated by the law enforcement incident commander. This is both a logical process and an exercise in judgment. Still, the overall principle remains for Penobscot County EMA UAS pilots in deciding whether to use UAS reasonably based on the facts and circumstances of the investigation and use the least intrusive means to accomplish an operational need.

Penobscot County EMA UAS pilots shall examine the existing policy and procedures relating to the collection, use, retention, and dissemination of information obtained by UAS pilots before deployment of new UAS technology and annually to ensure that privacy, civil rights, and civil liberties are protected.

i. Any information collected by UAS is only used to the extent consistent with and relevant to an authorized purpose.

ii. Retention of Information collected using a UAS that may contain personally identifiable information (PII) shall not be retained for more than 180 days unless retention of the information is determined to be necessary to an authorized mission of the retaining agency, is maintained in a system of records covered by the Privacy Act or is required to be retained for a more extended period by any other applicable law or regulation.

iii. All missions will comply with the Privacy Act of 1974 (5 U.S.C. 552a} in applicable circumstances.

iv. All flights will be recorded by the UAS on a secure system as required by the Privacy Act. All data is archived, and access is limited to authorized internal personnel or a public safety official who has a need-to-know only. All data entries are permanent and cannot be modified post-flight. Only limited authorized personnel have access to the UAS data platform and all recorded data. Authorized personnel are all vetted and must hold proper credentials. This pertains to all data covered under the UAS capabilities.

v. The telemetry data collected by each UAS is recorded within the UAS and synched to the UAS data platform for storage on encrypted and secure servers. When recorded, the video is saved to a micro-SD card, copied to a secure local hard drive, and the SD card is erased. Access to the local hard drive is limited to authorized personnel only.

vi. As required by law, data stored on the UAS will be purged or deleted as soon as feasible per investigation or mission requirements.

vii. Data obtained by UAS is only disseminated as required by the mission to internal staff and the requesting agency(s) that need to know. Data not maintained in a system

of records covered by the Privacy Act shall not be disseminated outside the agency unless dissemination is required by law or fulfills an authorized purpose and complies with agency requirements.

UAS recorded data will not be collected, disseminated, or retained solely to monitor activities protected by the U.S. Constitution, such as the First Amendment's protections of religion, speech, press, assembly, and redress of grievances (e.g., protests, demonstrations). Penobscot County EMA will prohibit the collection, use, retention, or dissemination of data in any manner that would violate the First Amendment or in any manner that would discriminate against persons based on their ethnicity, race, gender, national origin, religion, sexual orientation, or gender identity, in violation of law. Penobscot County EMA will regularly review documentation and policies related to data-sharing agreements, data use, and record management applicable to UAS to ensure they conform to applicable laws, regulations, and policies. Collection, use, dissemination, or retention of UAS recorded data should not be based solely on individual characteristics (e.g., race, ethnicity, national origin, sexual orientation, gender identity, religion, age, or gender), violating the law. Penobscot County EMA UAS pilots who intentionally use the drone without proper authorization or in deviation from the standards outlined in this policy shall be subject to disciplinary action.

When Penobscot County EMA's UAS is requested to support a law enforcement operation, compliance with Maine Law: Title 25 Part 12: Ch 551; Regulation of unmanned aerial vehicles (UAV), which is the term used in Maine law highlighted below that is interchangeable with UAS, will be adhered to and is outlined below.

i. All persons operating unmanned aerial vehicles will be certified by the FAA and trained for the intended type of flight.

ii. Prior authorization from the chief administrative officer of the law enforcement agency seeking the use of the Penobscot County EMA unmanned aerial vehicle is required.

iii. The deployment of an unmanned aerial vehicle for criminal investigative purposes must be approved by the Maine Attorney General or chief prosecuting attorney for the appropriate jurisdiction (signed warrant or valid consent).

iv. Use of visual, thermal, and zoomed imagery are permitted. No facial recognition is permitted, and NO UAV will be equipped with any type of weapon.

v. Flight pre-planning, incident briefings, and flights above 200' above ground level at a speed of 5 mph or more will be used to minimize and avoid the inadvertent visual recording of third parties or private spaces not under investigation.

vi. Any unnecessary video recordings unrelated to the investigation will be erased.

vii. The UAV Operations Director will manage the number of UAVs deployed to a single incident or investigation.

viii. Operators of a UAV will take all precautions available to avoid hazards to persons or property with appropriate take-off and recovery sites and no flight over people.

ix. Annual Unmanned Aerial Vehicle Report will be submitted to the Maine Commissioner of Public Safety on behalf of law enforcement agencies supported by Penobscot County EMA before July 1st for the previous year. [25 M.R.S.A. § 4501(6)]

VIII. REPORTING REQUIREMENTS

Under a Part 107 license, agencies are not required to report flight operations to the FAA if operations are within the preestablished guidance. Any deviation from normal Part 107 flights requires an emergency operational waiver and reporting. The Special Government Interest waiver found in Appendix D must be completed and submitted prior to flight. Documentation of all operations associated with UAS activities is required regardless of the airspace in which the UAS operates under a Part 91 Certificate of Authorization from the FAA. NOTE: Negative (zero flights) reports are required. Penobscot County EMA must submit the following information monthly to 9-AJV-115-UASOrganization@faa.gov.:

i. Name of proponent and aircraft registration number
ii. UAS type and model
iii. All operating locations, to include city name and latitude/longitude
iv. Number of flights (per location, per aircraft)
v. Total aircraft operation hours
vi. Takeoff or landing damage
vii. Equipment malfunction - required reports include, but are not limited to, failures or malfunctions to the:

1) Control station
2) Electrical system
3) Fuel system
4) Navigation system
5) On-board flight control system
6) Power plant
7) The number and duration of lost link events (control, performance and health monitoring, or communications) per UAS, per flight.

Penobscot County EMA must provide initial notification to the FAA via email at 9-AJV115-UASOrganization@faa.gov and via the CAPS forms (Incident/Accident) within 24 hours of an incident or accident that meets the following criteria:

i. All accidents/mishaps involving UAS operations where any of the following occurs:

1) Fatal injury, where the operation of a UAS results in a death occurring within 30 days of the accident/mishap

2) Serious injury, where the operation of a UAS results in:

- Hospitalization for more than 48 hours, commencing within 7 days from the date of the injury was received;
- A fracture of any bone (except simple fractures of fingers, toes, or nose);

- Severe hemorrhages, nerve, muscle, or tendon damage;
- Involving any internal organ; or
- Involves second- or third-degree burns or any burns affecting more than five percent of the body surface.

3) Total unmanned aircraft loss
4) Substantial damage to the unmanned aircraft system where there is damage to the airframe, power plant, or onboard systems that must be repaired before further flight
5) Damage to property other than the unmanned aircraft
6) Any incident/mishap that results in an unsafe/abnormal operation, including but not limited to:
    - A malfunction or failure of the unmanned aircraft's on-board flight control system (including navigation)
    - A malfunction or failure of ground control station flight control hardware or software (other than loss of control link)
    - A power plant failure or malfunction
    - An in-flight fire
    - An aircraft collision involving another aircraft.
    - Any in-flight failure of the unmanned aircraft's electrical system requiring the use of alternate or emergency power to complete the flight
    - A deviation from an ATC clearance and/or Letter(s) of Agreement/Procedures
    - A lost control link event resulting in:
        - Fly-away
        - Execution of a pre-planned/unplanned lost link procedure.

ii. Initial reports must contain the information identified in the CAPS Accident/Incident Report.

iii. Follow-on reports describing the accident/incident/mishap(s) must be submitted by providing copies of proponent aviation accident/incident reports upon completion of safety investigations.

iv. The above procedures are not a substitute for separate accident/incident reporting required by the National Transportation Safety Board under 49 CFR §830.5.

IX. FILING A COMPLAINT

Anyone wishing to file a complaint or a civil liberties complaint may do so by contacting the Penobscot County Administrator with the following information:

1. Complainant Name
2. Full mailing address
3. E-mail address
4. Telephone number
5. Nature of complaint
6. Date and location for which complaint is founded
7. Allegation of activity affecting Civil Liberties
8. Signature of complainant

The Penobscot County Administrator will promptly acknowledge receipt of the complaint and initiate an investigation. The Penobscot County Administrator can be contacted at 207-942-8535 or emailed at admin@penobscot-county.net. Hand-delivered complaints should be brought to 97 Hammond Street, Bangor, Maine 04401.

X. AUTHORITIES AND REFERENCES

The Privacy Act of 1974 (5 U.S.C. 552a)
Public Law (112-95, § 334 – Public Unmanned Aircraft Systems)
FAA regulation (Title 14 CFR, § 21.191 – Experimental certificates)
FAA regulation (Title 14 CFR, § 91.209 – Aircraft Lights)
Maine Law (Title 25 Part 12: Ch 551 – Regulation of Unmanned Aerial Vehicles)

APPENDIX A

Penobscot County Emergency Management Agency
UAS Mission Form

Date: **Time:** (Local)

Remote Pilot in Command Name:

Incident Commander Name and Agency:

Current Weather Conditions:

Temp (deg c): **Baro:** **Ceiling:** **Wind**:

Type of Incident:

Mission Objectives

Incident Location

Street Town County Coordinates

Area of Operation

Describe the area of operation and hazards to flight:

List Airports within 10 miles of Area of Operation

NOTAM Number: _____

RPIC: signed _____ Date/Time _____

APPENDIX B

NOTICE TO AIR MISSIONS (NOTAM)

NOTAM is a notice containing information (not known sufficiently in advance to publicize by other means) concerning the establishment, condition, or change in any component (facility, service, or procedure of, or hazard in the National Airspace System) the timely knowledge of which is essential to personnel concerned with flight operations. The majority of NOTAMs issued are warnings, and it is the drone operator's responsibility to ensure that all NOTAMs are checked before conducting each flight to ensure there are no NOTAMs to affect.

NOTAMs are issued (and reported) for several reasons, such as:

- Hazards including air shows, parachute jumps, kite flying, etc.
- Flights by VIPs such as heads of state (sometimes referred to as Temporary Flight Restrictions, TFRs)
- Closed runways
- Inoperable radio navigational aids
- Military exercises with resulting airspace restrictions
- Temporary erection of obstacles near airfields (e.g., cranes)
- Passage of flocks of birds through airspace (known as a BIRDTAM)
- Notifications of snow, ice, and standing water (a SNOWTAM)

The Remote Pilot in Command must contact the NOTAM Flight Service Station at 877-487-6867 for pre-planned operations and provide the following information:

- Name & contact information of the pilot filing the NOTAM request.
- Location, Address, Lat/Long, with the radius of the planned operating area
- Altitude
- Date and time (range) of planned operation
- Nature of the activity

After the operation or cancellation of planned operations, the pilot must cancel the NOTAM.

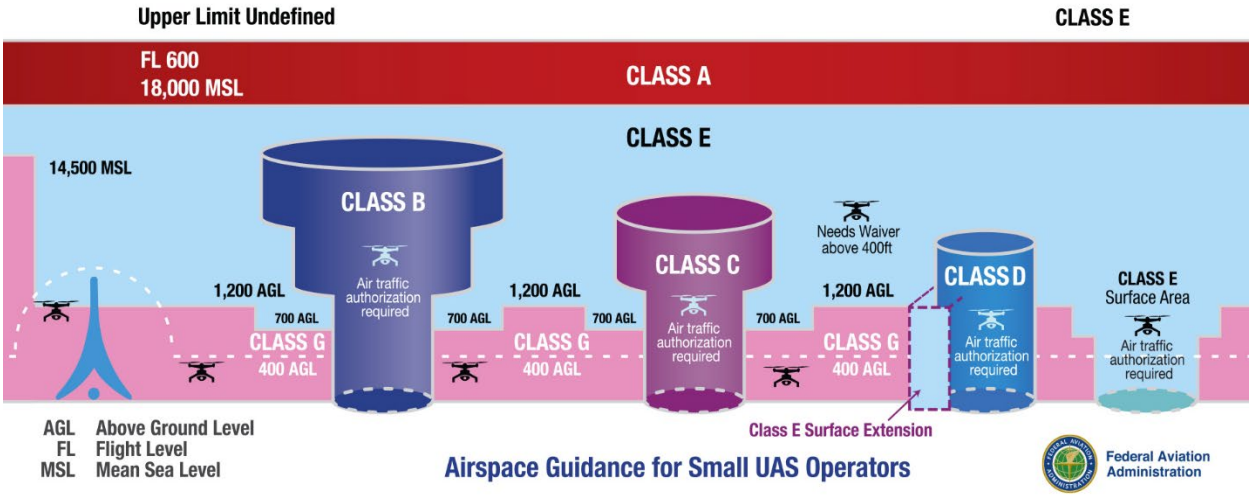
To deploy quickly in support of first responders where time is of the essence, the NOTAM request may be issued as soon as practical before the flight. If the issuance of a NOTAM may prolong emergency response efforts and thus endanger the safety of persons on the ground, it may be excluded.

This exception is not to be taken lightly, and the pilot must be prepared to justify to the FAA upon request.

APPENDIX C

NATIONAL AIRSPACE GUIDANCE

FAA rules apply to the entire National Airspace System -- there is no such thing as "unregulated" airspace. Drone operators should know the difference between controlled and uncontrolled airspace and where you can legally fly. Controlled airspace is found around some airports and at certain altitudes where air traffic controllers actively communicate with, direct, and separate all air traffic. Other airspace is uncontrolled because air traffic controllers do not direct air traffic within its limits. Generally, Remote Pilots in Command can only fly in uncontrolled airspace below 400 feet above the ground (AGL). The picture and table below highlight each class category with a description.



Class	Description
Class A	Generally, airspace from 18,000 feet mean sea level (MSL) up to and including fl ight level (FL) 600, including the airspace overlying the waters within 12 nautical miles (NM) of the coast of the 48 contiguous states and Alaska. Unless otherwise authorized, all pilots must operate their aircraft under instrument flight rules (IFR).

Class B	Generally, airspace from the surface to 10,000feet MSL surrounding the nation's busiest airports in terms of airport operations or passenger enplanements. The configuration of each Class B airspace area is individually tailored, consists of a surface area and two or more layers (some Class B airspace areas resemble upside-down wedding cakes), and is designed to contain all published instrument procedures once an aircraft enters the airspace. An air traffic control (ATC) clearance is required for all aircraft to operate in the area, and all aircraft that are so cleared receive separation services within the airspace.
Class C	Generally, airspace from the surface to 4,000 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower, are serviced by a radar approach control, and have a certain number of IFR operations or passenger enplanements. Although the configuration of each Class C area is individually tailored, the airspace usually consists of a surface area with a 5 NM radius, an outer circle with a 10 NM radius that extends from 1,200 feet to 4,000 feet above the airport elevation and an outer area. Each aircraft must establish two-way radio communications with the ATC facility providing air traffic services prior to entering the airspace and thereafter maintain those communications while within the airspace.

Class D	Generally, that airspace from the surface to 2,500 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower. The configuration of each Class D airspace area is individually tailored and when instrument procedures are published, the airspace will normally be designed to contain the procedures. Arrival extensions for instrument approach procedures (IAPs) may be Class D or Class E airspace. Unless otherwise authorized, each aircraft must establish two-way radio communications with the ATC facility providing air traffi c services prior to entering the airspace and thereafter maintain those communications while in the airspace.
Class E	Generally, if the airspace is not Class A, B, C, or D, and is controlled airspace, then it is Class E airspace. Class E airspace extends upward from either the surface or a designated altitude to the overlying or adjacent controlled airspace. When designated as a surface area, the airspace will be configured to contain all instrument procedures. Also in this class are federal airways, airspace beginning at either 700 or 1,200 feet above ground level (AGL) used to transition to and from the terminal or en route environment, and en route domestic and offshore airspace areas designated below 18,000 feet MSL. Unless designated at a lower altitude, Class E airspace begins at 14,500 MSL over the United States, including that airspace overlying the waters within 12 NM of the coast of the 48 contiguous states and Alaska, up to but not including 18,000 feet MSL, and the airspace above FL 600.
Class G	Airspace not designated as Class A, B, C, D, or E. Class G airspace is essentially uncontrolled by ATC except when associated with a temporary control tower.

APPENDIX D

SPECIAL GOVERNMENT INTEREST WAIVER

FAA
Air Traffic Organization
System Operations Security

FAA REQUEST FORM FOR EXPEDITED SGI WAIVER OR AUTHORIZATION FOR UAS OPERATION

Basic Qualifications

- ☑ The requesting operator must possess a Certificate of Waiver or Authorization (COA) or Part 107 Pilot License
- ☑ The UAS operation must support an emergency response or other effort being conducted to address exigent circumstances and that will benefit the public good
- ☑ The requested FAA approval cannot be secured via normal processes in time to meet urgent operational needs

Operator Information

Mandatory entry

Operator Organization (e.g., agency or company)
Operator Address
Operator Point-of Contact (including name, office + mobile phone number, and email)
Pilot and Observers (including names, mobile phone numbers, and emails)
Type of UAS and Registration Number

Documentation

If the requested UAS operation will be flown under a pre-existing COA, please attach it hereto and provide the COA number below.
If the requested UAS operation will be flown under Part 107, please provide the Part 107 Pilot License number below.

Requested Flight Details

Enter the date(s) of the proposed UAS operation (e.g., 03/18/2018 or 03/18/2018-03/21/2018) Mandatory entry
Enter the times of the proposed UAS operation (be sure to confirm time zone; e.g., 1200L-1400L daily) Mandatory entry
Enter the location of the proposed flight (reference the nearest city or town, and state; e.g., Gulfport, MS)
Enter the distance and direction from the nearest airport, and FAA identification of the same (e.g., 6 NM W of GPT)
Identify the class(es) of airspace in which the flight will be conducted (e.g., Class G/E/D/C/B/A)

Requested altitude of UAS flight: Mandatory entry	
Enter GIS details defining location of proposed flight (only one area type description needed) Mandatory entry	
For those flights remaining within a general contiguous area, which can be described as a circular polygon, provide the latitude and longitude, expressed as **degrees/minutes/seconds**, of the center of that area and the radius of that same area (e.g., XX:XX:XXN / XXX:XX:XXW - .25NM radius)	
For those flights remaining within a general contiguous area, which cannot be easily described as a circular polygon, provide the latitude and longitude, expressed as **degrees/minutes/seconds**, of the vertices of the general area starting with the most northerly point and then progressing clockwise (e.g., (XX:XX:XXN / XXX:XX:XXW; XX:XX:XXN / XXX:XX:XXW; XX:XX:XXN / XXX:XX:XXW)	
For those flights following an extended route, provide the latitude and longitude, expressed as **degrees/minutes/seconds**, of the key waypoints of the route, and, as appropriate provide the width of the route (e.g., XX:XX:XXN / XXX:XX:XXW; XX:XX:XXN / XXX:XX:XXW ; XX:XX:XXN / XXX:XX:XXW ; XX:XX:XXN / XXX:XX:XXW - .25NM wide)	

Nature and Description of Event		
Enter the type of urgent UAS operation to be flown		Description of event
☐	Firefighting Law Enforcement Search and Rescue	
☐	Local / National / Natural Disaster	
☐	Other (specify below)	

Additional Pilot Qualifications	
Enter additional pilot qualifications	
☐	Sport/Recreational/Private pilot certificate
☐	Commercial/Airline pilot certificate
☐	Flight instructor certificate

Contacting the SOSC
The SOSC office and email (9-ATOR-HQ-SOSC@faa.gov) are staffed/monitored 0600-2400 Eastern Time. For all emergencies, please follow up any email with a phone call to 202-267-8276, which is answered 24/7.

APPENDIX E

DJI MAVIC 3T ENTERPRISE – THERMAL CAMERA

The MAVIC 3T Advanced Pilot Assistance System (APAS 5.0) has wide-angle lenses on all sides of the drone for omnidirectional obstacle avoidance with zero blind spots. The Remote Pilot in Command can adjust proximity alarms and braking distance depending on mission requirements. When surveying, the camera sensor has a mechanical shutter and 0.7-second interval shooting to prevent motion blur and pinpoint accuracy for 3D modeling. Additionally, the MAVIC 3T automatically adjusts altitude when mapping areas with variations in elevation, all without needing to import external elevation data, thanks to its omnidirectional sensing. The MAVIC 3T's Advanced Return to Home (RTH) feature automatically plans the optimal route home to enhance in-flight safety and aircraft stability, saving power, time, and hassle.

Weight	2.3 pounds
Max Flight Speed (at sea level, no wind)	33 mph (normal mode) 47 mph (sport mode)
Max Flight Time (no wind)	45 minutes
Max Hover Time (no wind)	38 minutes
Operating Temperature Range	14° to 104° F
Thermal Camera	48MP; 56x Zoom; 640x512 Res; point and area temperature measurements
Speaker	110dB @ 3ft.